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Gingelly Oil Treatment for Beri-Beri Cases

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Government of

Gingelly Oil Treatment for Beri-Beri Cases

ITS ORIGIN AND PROGRESS

By D. J. MELCHIZEDEK
Apothecary and Certificated Sanitary Inspector
Government of Negri Sembilan
Federated Malay States

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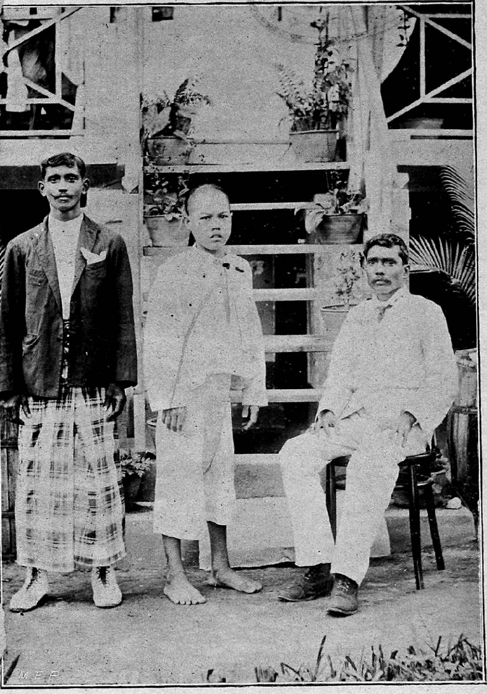

THE BOY CRIPPLE LEE CHOI
D. J. MELCHIZEDEK ON THE RIGHT

8 JUL 1909

PREFACE

Perusal of the pages of this booklet will reveal the object of this work. It is not intended for scientific discussion, but it is meant to place before the public the wonderful and undeniable work that Gingelly Oil can do in cases of Beri-Beri, a disease which requires a Specific treatment and not a Symptomatic treatment, as the latter brings only misery upon the unfortunate sufferers and is like adding fuel to fire.

Previously attempts were made to cure a patient by all kinds of supposed scientific treatment, but still in reality it should be called Emperic treatment, as no medicine that was used was a germicide or antitoxin and consequently did more harm than good. The Symptomatic treatment was allowed only because it was proposed by authorities in good spirit and not because it did good.

It is quite evident that all these drugs did not do any good, but on the other hand either aggravated the disease or damaged the systems of Beri-Berics by lowering the vitality and exposed them to permanent harm or loss of life.

The two necessary agents required to save a man suffering from Beri-Beri are these:

1. To destroy the Poison.
2. To repair the Damages.

For instance, when a house is on fire, to put the whole thing right, it is necessary, first, to apply

something to quench the flame, and, second, materials must be procured to rebuild the house. Any attempt to rebuild the house without the proper material, needless to say, would be futile. Neglect of such procedure and precaution on the part of those who undertook to treat this disease resulted only in the exhibition of such hideous and bloated figures as one sees in Selangor hospitals, and which are known there as wet cases, and crippled or bed-ridden patients that are seen in Negri Sembilan hospitals as dry cases.

Classification

Classification of this disease as Wet and Dry is in my opinion a wrong way of classification. It is not that Beri-Beri could possibly be caused by two kinds of bacilli or poisons produced by such varieties of bacilli. I am prone to think that when the peripheral nerves of the kidneys are subject to the influence of the poison it alters the action of the kidneys and the result is oedema. Likewise that of the liver—the patient becomes jaundiced; that of the spleen is anaemic; that of the heart—dropsy; that of intestines—dysentery and diarrhoea; which in a collection are called intercurrent diseases.

Doctor Max Brawn in his hand-book of "The Animal Parasite of Man," has rightly decided that the above disturbances are attributable to the "degenerative inflammation of numerous peripheral

nerves" and if not for such irreparable decay of nerve cells, all these kinds of undesirable and painful symptoms that a Beri-Beric is doomed to suffer will not occur. The best way then, to classify the disease as simply as possible, would be as follows:

Beri-Beri

Malignant | **Acute** | **Chronic** | **Infantile Beri-Beri**

Malignant Beri-Beri is the most fearful type and it can be compared to the malignant type of Malarial Fever. The difference is that a patient dies in Malignant Tertian of Coma and in Malignant Beri-Beri of Syncope.

In *Acute and Chronic* cases a patient dies of Beri-Beri Cahecxia, if I may be allowed to so call it, as is the same case with Malarial Fever.

Infantile Beri-Beri. I have seen only two cases, but it does not seem to be dangerous.

What about the treatment. Does Beri-Beri get treatment? No; only the intercurrent diseases get treatment under the title of Symptomatic treatment, such as, for kidney affection, iron diuretic or plain diuretic is given; for heart affection, tincture digitalis is given; for spleen affection, mixture iron is given; for the affection of the intestines, mixture astringent is given; for liver affection, something that the physician thinks proper is given. It can be easily decided that these medicines are not

remedies for the disease by the results obtained which are quite unfavourable. Then are we to abandon the patients to the attacks of this dire disease? No, not at all.

In nature, we find that God has provided all the necessary drugs suitable to mend the system when it begins to suffer from any kind of disease. As everybody knows, it is not the physician that creates medicines but God. The physician is only given power to find out the remedy. Every one knows now, God has provided a "specific" in Cinchona Bark for Malarial Fever. Then it is evident that He should have also provided a specific for Beri-Beri. Then where is the drug, wherein the specific is hidden?

It is surely in the Sesame Seed, for in the application of the oil extracted from it, the crippled walk and are redeemed from the grave. This is well proved in the Experiments Nos. 1 and 11, both at Selangor and Negri Sembilan.

It happened that I should point out to the district surgeon that the other name of "Gingelly Oil" is "Sesame Oil." He asked me if I knew the story of Ali Baba and the forty thieves. I said, yes. There, he said to me, the wood-cutter mentioned the names of all the oils in the world, but when he said "Open Sesame" the door opened. The district surgeon evidently alluded to the walking of the cripples by the application of the Sesame

Oil, as he was an eye witness to such a miraculous action of the drug.

Finally, as is said elsewhere in this booklet, the properties of this oil are Emollient, Nutrient, Antiseptic and Tonic. Then what hesitation should there be in accepting the present mode of treatment of Beri-Beri with this oil as a rational one, and the oil a specific for the specific bacillus mentioned by Dr. Wright, M.D., C.M., in the following extract, and, if it is not a specific, how can patients that were crippled for months under other treatments, walk again? It is not in one case, where it might be said to be accidental, but in several cases.

Some Clinical Cases and their Bacteriology, by Hamilton Wright, M.D., C.M. (McGill). British Medical Journal, Page 1563, 1st December, 1906: "Beri-Beri is an acute infectious disease with a short incubation period (10 to 20 days). The essential cause is not any foodstuff or deficiency of any constituent of such foodstuff. Nor is it a specific micro-organism whose special habitat is a particular food material, such as fish or rice. On the contrary, it is a specific bacillus which exists under those general conditions which govern the existence of nearly all well-known specific micro-organisms."

D. J. M.

BERI-BERI PATIENTS TAKING BATH

6 - JUL 1909

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GINGELLY OIL TREATMENT

FOR

BERI-BERI

ITS ORIGIN AND PROGRESS

Experiment No. I

As my experiments with Beri-Beri cases for the last one year have been eminently successful, I wish to give a detailed description of the treatment I adopted.

When I came to Straits, I was given to understand that this disease generally received only "Symptomatic Treatment" as no specific had been found as yet. However, I took a special interest in studying the disease and treated it as carefully as possible, as I was struck with the horrible sufferings of the poor unfortunate patients and the sudden and unexpected deaths that occurred, in

spite of all the doctor's care and trouble. I observed also that the patients, after becoming crippled for life, were not only a burden to the State but to themselves as well.

On the outset, I was treating the patients as per hospital routine treatment by giving mixture chlorine, and for the development of intercurrent diseases, such as oedema, diarrhoea, dysentery and palpitation of the heart, etc., used the mixture given in the hospital for such maladies. But when such symptoms arose, I found they became uncontrollable by these mixtures or the patients invariably died.

It came to my thought happily that a slight judicious alteration in diet which would have the effect of lessening the formation of toxin and assist in the elimination of the poison might help to relieve the sufferings of the patients as well as help to minimize the death rate.

Then it struck me also that the avoidance of pork (which forms a nutrient media to Beri-Beri bacilli) and the administration of Gingelly Oil (which forms a germicide to Beri-Beri bacilli) might help the treatment, and hence I ordered a Tamil diet instead of a Chinese diet, thus providing the patient with such articles as I desired to give without much difficulty or extra expense.

By this change, I observed some slight improvement in the virulence of the disease, and the

patients to some extent were relieved from their sufferings. Being encouraged by this slight change, I next gave, in addition, hot water baths with inunction of the oil once a week. I now observed a marked change in the discharging of patients and number of deaths. This favourable result emboldened me to administer the oil itself in the form of emulsion internally. In this, I found a great deal of good. The patients had relief from all their sufferings in general. Their numbness and weakness steadily disappeared, and they looked brighter and more cheerful, and became a proof against the development of intercurrent diseases, or, in other words, escaped death. Under these circumstances, I am led to believe that Gingelly Oil is no doubt a specific for the disease "Beri-Beri."

I beg permission to confirm the above statement for three reasons:

1. I obtained a favourable result during the year 1906 by giving baths with Gingelly Oil and giving Tamil diet in which the oil was used invariably. The result was as follows: Out of the 102 cases admitted, 46 received the Chinese diet and received no baths: out of which 9 cases died, and those that were discharged stayed a long time in the hospital. Fifty-six cases received baths and Tamil diet: out of which only 2 cases died.

RESULT STATEMENT

No. of cases admitted in 1906.	No. of cases under Chinese Diet.	No. of Deaths.	No. of cases under Tamil Diet.	No. of Deaths.	P. C. Chinese Diet.	P. C. Tamil Diet.
102	46	9	56	2	19·8	3·57

2. That the oil produced wonderful results when administered internally.

Instances

Reg. No. 112 *(a)*.—A Chinaman who was admitted in a more or less dying state, had great relief from all his sufferings in an hour's time after the administration of the oil, and in two days' time he was able to walk. Another important thing to notice was that his temperature also came down without the aid of quinine.

Reg. No. 867 *(b)*.—Another Chinaman, who was admitted on the 18th November, 1906, quite paralysed, was in the same condition until such time as the oil was administered to him. He received the oil on the 12th of January, 1907, and on the 5th of February, 1907, he got out of bed and began to walk with the aid of a stick.

Reg. No. 639 (*c*).—Another Chinaman who was suffering from wet Beri-Beri was admitted on 1st September, 1906, after an illness of three months. Very many times I thought he would pass off, but he pulled on through baths and diets. His swelling got reduced, but he was bed-ridden. I thought I could not do much for him. Luckily, he had a chance to receive the oil treatment internally. It will be seen from his bed ticket that he received the oil treatment on 12th June, 1907, and was able to get out of bed and stand with the aid of a stick. That is the man who was bed-ridden for 7 months. After a short period of 30 days of administration of the oil, he was able to leave the bed and now he is walking about to the surprise of his co-patients. (*Vide* Head Ticket, Rawang District Hospital of which I was in charge in 1906-07).

3. That, by the administration of the oil internally, patients that were making very slow progress under other modes of treatment made rapid progress and were relieved of their terrible suffering. The crippled walked and the dying escaped death. This can be seen in the Exhibit No. 1.

Another thing that stands in favour of this treatment is a grand reduction in expenditure.

The total amount the Government had to spend on 24 discharged patients under Symptomatic treatment and Chinese diet was $285·37½ cents.

The total amount the Government had to spend on 24 discharged patients under the Gingelly Oil treatment and Tamil diet was $68·28 cents.

Please *vide* Exhibits Nos. 2 and 3.

The methods of treatment adopted in "Treating Beri-Beri patients in the District Hospital, Rawang:"

DRY CASES

Medicine	*Diet*
Gingelly Oil Emulsion twice a day.	Tamil diet: one fowl's egg: Whisky ½ oz. occasionally.

WET CASES

Medicine	*Diet*
Gingelly Oil Emulsion twice a day.	Tamil diet: one duck's egg: Gin ½ oz. occasionally.

Plain mixture diuretic may be used in such cases where oedema is not yielding.

Prescription

Gingelly Oil Emulsion

R. Gingelly oil	..	..	2 ounces
Gum	..	..	2 drams
Aqua	..	..	12 ounces

One ounce for a dose until sufficiently known that the poison is entirely cut off.

REMARKS

1. In severe cases, where death is threatening, the Emulsion should be given in double doses every four hours.

2. In all cases watch for indigestion, then the dose must be regulated.

3. Good results depend upon procuring unadulterated oil.

4. If it is observed that the patients have a dislike for taking the oil, it is a sure sign of their feeling better. In this case, discontinue the oil for a week or so; and then begin to give for a week, and so on.

5. Mixture diuretic may not be necessary in wet cases; but if oedema seems to be obstinate, an application of a plain diuretic mixture once a day may be found helpful. This should be used in a limited way.

6. If the trial be made with a better scale of diet, it may be found there will be no necessity for Tamil diet instead of the Chinese diet. But pork in all cases must be avoided.

7. The sanitary condition of the wards should be strictly maintained. Pure water and wholesome food should be given.

LESSONS AND CONCLUSIONS DRAWN FROM THE EXPERIMENTS

1. Treating symptoms in Beri-Beri cases does no good.

2. Mixture chlorine is the only medicine that seems to arrest the progress of the disease, but under its use the muscles of the hands and legs become attenuated, and hence patients become crippled and bed-ridden.

3. Mixture astringent arrests elimination of the toxin from the system and causes death.

4. Mixture ferri et diuretic is a mixture that is given in wet cases. It does a lot of harm sometimes.

5. Tincture digitalis and spirits ammonia aromatic are used when heart becomes affected. I have not seen one case survive after its administration.

So much for the routine treatment. As regards the use of Gingelly Oil, I have to record the following results:

1. Gingelly Oil is found to allay the sufferings of a patient. Even the first dose begins to act favourably. It not only arrests the progress of the disease, but saves patients from death.

2. As the medicine begins to act, the patients themselves feel they are out of danger and assume a cheerful countenance. Their attenuated muscles begin to regain vigour and assume a growing

appearance. Crippled and bed-ridden patients begin to walk.

3. The oil has in all cases under my care prevented development of intercurrent diseases.

I have to thank Mr. E. T. Scott, my junior dresser, for all the good help he gave in these experiments.

N.B.—I do believe that Gingelly Oil is a Specific for Beri-Beri. This I claim to be purely my own innovation and discovery.

D. J. MELCHIZEDEK,
Apothecary, Federated Malay States.

EXHIBIT No. 2

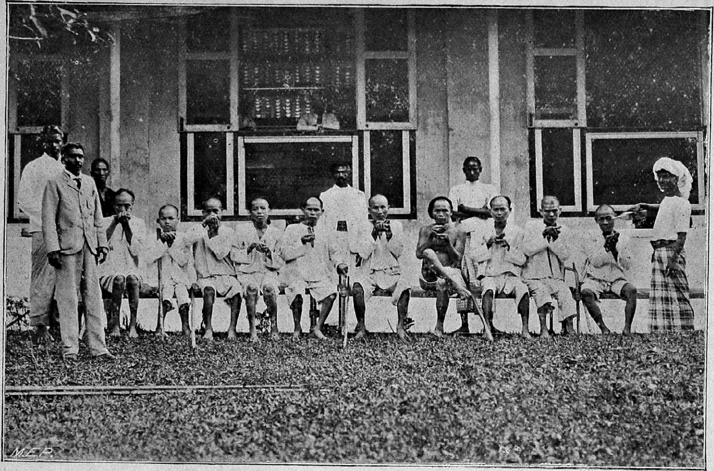
Statement showing the Expenditure the State incurred in supporting 24 discharged cases of Beri-Beri under Gingelly Oil Treatment and Tamil Diet

No.	Register No.	NAMES	Date of Admission	Date of Discharge	No. of days in hospital	Remarks
1	323/06	Ah Fook ..	12—1—07	8—2—07	27	The total No. of days these 24 patients remained in hospital is 569, and at 12 cents per day a patient the amount spent on them is $ 68·28.
2	867	Chin Sin ..	12—1—07	18—2—07	37	
3	886	Choo Sen ..	12—1—07	19—2—07	38	
4	887	Lim Poh ..	12—1—07	10—2—07	29	
5	911	Choo Sung ..	12—1—07	3—3—07	50	
6	692	Choo Fook ..	12—1—07	13—2—07	32	
7	1007	Loh Pang ..	12—1—07	13—2—07	32	
8	40	Chang Choo ..	12—1—07	18—2—07	37	
9	44	Ah Sin ..	13—1—07	16—2—07	34	
10	63	Len Chong ..	19—1—07	28—2—07	40	
11	64	Assan ..	20—1—07	12—2—07	23	
12	66	Tham Meg ..	20—1—07	14—2—07	25	
13	74	Lee Shin ..	23—1—07	30—1—07	8	
14	77	Sam Lam ..	23—1—07	10—2—07	19	
15	78	Lin Yoh ..	23—1—07	10—2—07	19	
16	112	Lam Gee ..	6—2—07	12—2—07	7	
17	115	Lye Thah ..	7—2—07	15—2—07	9	
18	127	Hoh Pon ..	12—2—07	4—3—07	21	
19	138	Ong Sam ..	15—2—07	10—3—07	24	
20	156	Chan Lin ..	18—2—07	26—2—07	9	
21	174	New Yong ..	25—2—07	3—3—07	7	
22	183	Lim Chit ..	28—2—07	10—3—07	11	
23	189	Sin Lup ..	2—3—07	10—3—07	9	
24	1011	Poo Yon ..	30—1—07	20—2—07	22	
				TOTAL..	569	

EXHIBIT No. 3

Statement showing the Expenditure the State incurred in supporting 24 discharged cases of Beri-Beri under Symptomatic Treatment and Chinese Diet.

No.	Register No.	NAMES	Date of Admission	Date of Discharge	No. of days in hospital	Remarks
1	25	Kok Sien ..	13—1—05	23—3—05	69	The total No. of days these 24 patients remained in hospital is 2,283, and at 12½ cents per day, the amount spent on them is $285·37½
2	48	Von Floor ..	21—1—05	3—7—05	163	
3	71	Seang Hung ..	8—2—05	9—7—05	151	
4	72	Lot Mat ..	8—2—05	19—4—05	70	
5	75	Lan Kuan ..	10—2—05	28—4—05	77	
6	93	Theng Chong ..	17—2—05	17—4—05	59	
7	102	Men Keong ..	20—2—05	21—7—05	151	
8	134	Yon Tek ..	7—3—05	6—8—05	152	
9	175	Yeo Seong ..	12—3—05	22—7—05	123	
10	181	Choo Kong ..	24—3—05	22—7—05	120	
11	195	Lee Song ..	27—3—05	22—7—05	117	
12	224	Soo Cheng ..	7—4—05	16—8—05	131	
13	231	Lim Mee ..	8—4—05	22—7—05	105	
14	247	Chan Chin ..	15—4—05	22—7—05	98	
15	286	Sin Kan ..	6—5—05	6—7—05	61	
16	287	Hoon Soon ..	6—5—05	26—6—05	51	
17	289	Seng Yeon ..	17—5—05	23—9—05	139	
18	300	Lam Lee ..	10—5—05	22—7—05	73	
19	307	See Chong ..	11—5—05	1—7—05	50	
20	331	Choo Kee ..	17—5—05	22—7—05	66	
21	334	Yap Chiang ..	18—5—05	22—7—05	65	
22	337	Chan Yon ..	19—5—05	2—8—05	75	
23	343	Hong Won ..	20—5—05	22—7—05	63	
24	376	Bong Yon ..	29—5—05	22—7—05	57	
				TOTAL..	2,283	



BERI-BERI PATIENTS TAKING GINGELLY OIL

GINGELLY OIL TREATMENT

FOR

BERI-BERI CASES

Experiment No. II

After I was transferred to the Government of Negri Sembilan, I printed my essay and put a copy of it in the hands of Dr. A. A. Woods, District Surgeon, Seremban. This officer gave credit to my treatise and on looking at it he said "Why don't you try that on some cases here?" His remark meant a good deal. It must be either that he was pained to see in his ward patients in a state of misery and helplessness or he had a real interest in the welfare of the Government.

After these encouraging words and getting permission from him, I unhesitatingly prepared the exhibit attached herewith, which has thirty-six patients in all—thirteen of them crippled and bed-ridden—and showed the same to the District Surgeon.

On the 8th August, 1908, I began the treatment and in a week's time patients began to show improvement. Crippled patients—Register Nos. 1725, 2330, 1907, 2470, 1826, 2405, 1876, 2650, 2222, 2550, 2710, 2695, 2790—began either to walk or move out of bed to the wonderment of the hospital dressers and others, and patients Nos. 2298, 2243, 559, 1521, 189, 2078, 1967, 1783, and 1478 gave up the use of sticks, while the newly admitted patients—Nos. 1165, 2782, 2827, 2809, 2743, 2623, 2738 and 2823—got discharged quickly. During this experiment the District Surgeon closely watched the patients and made several remarks.

Visits of the District Surgeon

10th August, 1908

Dr. Woods visited the ward and enquired how the patients were getting on. The patients through their representative Chinaman expressed their joy and satisfaction and told also that they were getting better. The District Surgeon remarked, "Anyway, they look brighter." I informed him that the patients of the

other side also desired to take the same treatment. He said, "*Let us see how these get on.*"

The District Surgeon visited the ward with the steward and was glad to see the patients doing so well, and said, "This should have been done long ago." By this he meant the Gingelly Oil Bath.

12th August, 1908

I represented to him that the patients wanted something more to eat. After consideration he ordered the steward to give each patient a duck egg extra. The steward remarked that this could be done easily as it would not cost extra expense, the patients being prohibited from taking their usual supply of pork. The District Surgeon said that he was "well satisfied with the treatment" and asked me to put also the police constable, Register No. 2782, a Malay man, who was suffering from Beri-Beri under the same treatment and to continue the same in all acute cases.

Visited Ward To-day

Presented patient No. 2470, a cripple that began to walk within a short period of six days. In token of his appreciation and surprise the District Surgeon said,

14th August, 1908

"The Lame walk"
"The Blind see"
"The Dumb speak"

and went out of the ward with a cheerful countenance. This is the cripple that is standing in the middle of the photograph.

28th August, 1908

The District Surgeon visited the ward and inspected two other cripples that began to walk from the 15th and ordered to give the oil treatment to all the patients in the ward.

2nd September, 1908

The District Surgeon visited and inspected the bathing of the cripples and other Beri-Beri patients and enquired about the soap-nut that is used in bathing and asked if soap would not do. I told him that it would not clean the oil as well as the soap-nut. He enquired how it was obtained and where grown. I told him that we buy it and that it grows in India.

7th September, 1908

The District Surgeon visited again and made careful enquiries. I was not present. The dresser in charge showed patient No. 1876 and explained to him how the case was improving. I am informed also that he took a special interest in the boy cripple (Register No. 2470) who was seen by him to be a cripple, and as the patient got up from his bed to walk the District Surgeon was kind enough to hold him, as he thought the boy must be helped as usual. Whereupon the dresser informed him that he could walk without help, which the boy did before the District Surgeon without the aid

of a stick and even with quick steps. The dresser tells me the District Surgeon was very glad to see everything good and satisfactory in the ward.

The District Surgeon visited the Beri-Beri ward to-day with the Assistant Surgeon and gave orders to Dresser Chakrapathy to tell the apothecary to take more cases. The Assistant Surgeon told me the same thing and further said that the District Surgeon remarked that the cases were wonderfully improving under oil treatment.

16th September, 1908

To-day, the State Surgeon, Dr. W. L. Braddon, was brought by District Surgeon, Dr. A. A. Woods, to the scene of experiment. At that time the patients were taking the Oil bath. The District Surgeon said that he was giving a month's time to the apothecary to experiment and he knew that the treatment was doing good. I pointed out to him many cripples that were then walking. Thereupon, a long conversation took place. Dr. Braddon seemed as satisfied, but he wanted to know how the oil acts. I told Dr. Braddon that the solution of this question I would leave to higher authorities. In the meantime, Dr. Woods spoke highly of the treatment, and said in effect that he was now convinced of the usefulness of the treatment. Whereupon Dr. Braddon questioned as to what proof there was that this oil only

19th September, 1908

effected this cure, and said that he had seen one who had been a cripple walk again. In reply I gave the following as the grand proofs:—

1. Patients that became crippled under hospital treatment began to walk under oil treatment in as short a period as fifteen days.

2. That the oil made no one worse but did make every one well.

3. That a cripple after getting relieved began to grow healthy.

4. Patients that were walking with the help of sticks only for three and four months together gave them to be bundled up.

5. Patients that were more or less hospital birds for fifty, sixty, ninety, one hundred, and even two hundred days were discharged within twenty to thirty days.

6. Fresh cases were quickly relieved of their sufferings and went out of the hospital healthy.

7. Under the treatment patients look healthy, bright, and cheerful, and not miserable looking as under hospital treatment.

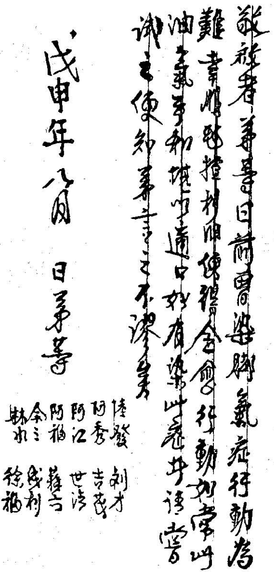
28th September, 1908

The District Surgeon made a special visit to discharge some patients who so desired. Patients Nos. 2470, 2405, 1436, and 2715 were discharged by him and patient No. 1826 was ordered by him to stay for a week more, although he begged him to discharge him saying that he felt better.

PERSONAL TESTIMONY OF PATIENTS

On the evening of the 4th instant, I visited the ward as usual. In the course of my conversation with the patients, many began to say that both their feet used to be dead—mati—but "now they get sensation gradually." Patient No. 1876 said that before taking this oil all his fingers of both hands were contracted and were pointing towards the palm of the hand but now he was able to stretch them and hold his food more firmly than before. Besides this, he had great difficulty in bending his arm to lift his food to the mouth but he could do it now freely, with comfort and ease—(*vide* Dresser Devadassen's certificate about the same patient, Register No. 1876, in other pages). In the meantime, another patient, No. 2743, called my attention and said that even if his legs had been cut off before he would not have known anything about it, but to-day there is good sensation in one leg while the other remains just the same. To hear these complaints, Dressers Devadassen, Thamotharam, and Assa Pillay were very glad and expressed their surprise. Mr. Devadassen told me that he knew patient No. 1876 was for a long time in the hospital, and that he had actually seen the patient a cripple and also saw the fingers of his hands all contracted and pointing towards the palm and that now he was stretching his fingers easily; surely this seemed to be a good effect of the oil.

Testimony of the cripples in the Chinese Language and signed by them:



敬啟者弟等日前患脚氣症行動為難[illegible][illegible][illegible]搽[illegible][illegible]使得全愈行動如常此油氣[illegible]和[illegible][illegible]適口如有染此症者請嘗試之便知弟等言之不謬也

戊申年八月 日弟等

陸發 阿秀 阿江 阿福 余三 林水

劉才 吉茂 世清 蘇[illegible] 錢利 徐福

The history of Dr. W. L. Braddon's Beri-Beri patient treated by Gingelly Oil after the recommendation of the doctor himself.

On the 23rd September, 1908, in the afternoon, I was given to understand by Mr. Armstrong, Mr. Giffening's brother-in-law, that Dr. W. L. Braddon, one of the best world-known authorities on Beri-Beri, has ordered a patient of his, Mr. Francis, of Bukit-Nanas plantation, who was suffering from Beri-Beri, to use Gingelly Oil. Mr. Francis being my friend I went to see him. He told me that he was suffering from Beri-Beri very badly and unable to work. His hands were contracted and his feet and legs swollen and unable to be of use. He could not even lift up a small tinpot with his hand. He had no sensation in his legs and was unable to walk. He asked me to show him how to use it, as Dr. Braddon only gave the name of the oil and gave no further instructions except to rub it. I put him in the way and got a quantity of the best kind of oil. As he was quite anxious about himself, he told me that he took two tablespoons of the oil at once. During the night he slept well for the first time and that the oil had worked wonders. All his symptoms began to disappear and he is able to walk now and able even to carry his child. I made it my duty to visit him daily. He is almost well now. A man who was not able to walk a few steps is able to leave his house and go about his business.

On the 4th October, 1908, I met him in the hospital, and asked him why he had come. He said that he came to get a dose of opening medicine. In the evening when I met him in his house, he told me to my surprise that he intended going to work. This patient took the oil in two table-spoonful doses three times a day and bathed with it every day. By doing so his swelling went down and he was able to walk freely. One of his friends who visited him a few days after he had been taking the oil treatment writes as follows :—

"I have seen Mr. Francis, my friend, who said that he is getting rid of Beri-Beri by taking Gingelly Oil."

29th September, 1908. (Sd.) NORRIS.

Testimony of Dr. W. L. Braddon's Beri-Beri patient—Mr. Francis.

SEREMBAN

6th September, 1908.

DEAR SIR,

I am glad to say I am now all right by using the Gingelly Oil that was recommended by Dr. Braddon to be used by me in rubbing. I am thankful to you for having given the proper instructions and directions how to use the oil. If not

for the oil, I should be now an abandoned cripple, and I and my family would have no means of support. Thanking you once more, I remain, dear Sir,

Your most obedient servant,

(Sd.) FRANCIS.

STATEMENT OF DRESSERS

Mr. Nagalingam came to see the ward as usual and noted the wonderful changes that were taking place. I pointed out to him many patients that were gradually recovering, among whom was patient No. 2470. He was a cripple on admission and now was walking slowly with the help of a stick. To show Mr. Nagalingam a curiosity I ordered the patient not to use the stick. The patient immediately dropped down and everybody laughed outright. In surprise Mr. Nagalingam said the work was something like raising the dead from the grave. Mr. Nagalingam wrote as follows: "I saw the patients in the Beri-Beri ward. They are progressing well under oil treatment." The above statement is a fact which I can corroborate.

(Sd.) NAGALINGAM,

Dresser.

Statement of Duty Dresser on Sunday:

My duty in ward No. 4 is to superintend, as per order of Apothecary D. J. Melchizedek, the distribution of the oil, and the patients take the oil most willingly.

(Sd.) R. MAHABARSINGH,
Dresser.

Statement in writing of Dresser Devadassen:

This patient, Register No. 1876, was in the 4th ward when I was working there, and had both hands contracted and unable to stretch them for four months and there was oedema in both legs, all of which has disappeared and the patient to my surprise can use his hands and is thoroughly better and in good health now.

13th September, 1908. (Sd.) DEVADASSEN.

TREATMENT

It may be supposed the oil treatment and the oil itself are insignificant things. But by perusing the pages of this booklet it will be seen how important the oil is to those who are actually crippled and who without it would be compelled to spend their lives in misery. Surely no one will neglect to give a trial to this oil if they are crippled.

It may be interesting to know how I discovered that the oil might be useful in cases of Beri-Beri. A perusal of the following article published by me under the heading, "The Triune Disease" will tell. A good deal of information as regards the symptoms, etc., of Beri-Beri are given there. Therefore, I need not again describe them in these pages. It will suffice to describe how knee-jerk, one of the certain symptoms of Beri-Beri, is found out.

The patient should be firmly seated on a strong bed and be made to cross his legs one over the other at the knee joint, then swing the upper leg and see if it is loose, and tap by the end of your fingers of the right hand under the patela over the tendon. If the foot will not give a jerk you may decide that the patient is suffering from Beri-Beri.

THE TRIUNE DISEASE

It is nothing but luck that we live in an age which enables us to gather information of events that take place in the remote corners of the world. In the times of old, epidemic diseases appeared in different countries and carried away millions of people but still it was seldom known to their neighbours. The case is quite different now; such occurrences are immediately communicated to different parts of the world and steps are taken to

arrest their spread in every way practicable. Even when such steps are taken, Plague is doing mischief in India, Beri-Beri in the East, and Sleeping Sickness in the West. Thousands of scientific and professional men are engaging themselves to do what they can to alleviate the sufferings of humanity, but still they have succeeded only in finding out how that these diseases originate. Such being the case, their time and energy are vainly spent, as no practical good has come of them.

My object in writing this small article is to introduce a remedy which I desire to see tried for all these three diseases, but before making this request I wish to show my readers how these diseases are related to each other and how they originate more or less from one and the same source, though they apparently are different.

It is universally admitted that this triune disease owes its origin to a germ which has an incubation period. The difference lies only in the kinds of exhibitions of symptoms which largely depend upon climatic and other influences.

I will here describe the different symptoms of these diseases as I have had the fortune to have varied and personal practice in the treatment of the diseases, Plague and Beri-Beri, and have read enough about the disease Sleeping Sickness to understand its nature, etc., and shall draw an analogy between them as clearly as I can.

1. Plague

Lieut.-Col. W. G. King, C.I.E., I.M.S., etc., etc., late sanitary commissioner of Madras, with whom I had the opportunity of visiting several Plague camps, has described the disease in full detail in his Plague Inspector, and gathering from all that he says in his book and what I saw personally I may record here the following as symptoms of Plague: The most prominent symptom that appears after the incubation period has passed is fever. The subsequent symptoms are great prostration and bodily disturbances. The intercurrent diseases are buboes, diarrhœa, bronchitis, dysentery, and convulsions, death being caused by failure of heart's action. Sometimes patients become victims of some intercurrent disease. If the patients survive, as in the case of Bubonic Plague, they suffer from general cachexia. The disease is a highly infectious one.

Treatment.—No treatment in fact is given. If any treatment is given it is only a symptomatic one. The fact that Dr. King, in his elaborate description of the disease, did not mention anything about the treatment is in itself a grand proof that the disease does not admit of symptomatic treatment.

2. Beri-Beri

The following are the various symptoms I observed in this disease: There is an incubation

period after which fever appears, followed by anorexia and disinclination for work. The special symptoms are numbness and weakness of legs and tenderness of calves on pressure, absence of knee-jerk, edema in wet cases and wasting of muscles in dry cases. The intercurrent diseases are diarrhœa, bronchitis, dysentery and convulsions, death being caused suddenly by failure of heart's action. In some cases, patients die of intercurrent diseases also. If the patient survives, as in most dry cases, he suffers from complete wasting of muscles and gets bed-ridden with bed sores till he dies from exhaustion.

Treatment.—"The treatment of Beri-Beri should be purely expectant, symptoms being dealt with promptly as they arise."—*Dr. P. N. Gerrard.*

3. Sleeping Sickness

The clinical symptoms of human trypanosomiasis, as observed in the few instances of white persons in England, seemed to be constant and distinctive. In at least one of these cases death occurred after the development of the symptoms of Sleeping Sickness. The symptoms of trypanosome disease, prior to the onset of the Sleeping Sickness, are as follows: Irregular and relapsing fever with intervals of normal temperature, the daily variation during the febrile attacks being from 1° to 2° F.; the gradual development of anemia or cachexia with the symptoms of dyspnea, palpitation, and a rapid feeble

pulse; localized edema, especially about the eyes, enlarged lymph glands, especially in the cervical region; progressive muscular weakness; enlarged spleen.

A peculiar eruptive manifestation of early trypanosomiasis is that of an ill-defined erythema, not clearly demarked, occurring irregularly over the body and limbs in circular patterns or in measly patches, the skin in these patches appearing slightly thickened or swollen. The blood shows a large mononuclear leucocytosis and gumbiense is present, either scantily or in considerable numbers, varying from one to eight to the film. That many of the symptoms pass unnoticed in the blacks in Africa is not surprising and there is no reason to believe that they do not precede the more conspicuous symptoms of Sleeping Sickness.

The symptoms of Sleeping Sickness in the Negro may be described as those of a meningoencephalitis. Headache, mental hebetude or torpor, or actual drowsiness are marked. The facial expression is dull and apathetic and while the memory is preserved, cerebration is slow. The digestion is sluggish and the tongue is furred, constipation being the rule. Muscular spasms, epilepti form convulsions, tremor and paretic symptoms in general gradually develop. The superficial reflexes are preserved, but the deeper ones are at first increased and then lost. The sensation is not greatly altered, except that a

general hyperesthesia is usually present. Of the motor symptoms tremor is the most conspicuous, while late rigidity of the posterior muscles of the neck and contraction of the flexors of the knees and hips are usually present. The mental state is not usually that of paralytic dementia (which disease Sleeping Sickness otherwise resembles), mania and the delirium of exaltation rarely being observed. On the contrary despondency and a consciousness of wretchedness is the rule. The disease usually runs a chronic course of from six to eight months, but it may be as brief as three months. Other symptoms, such as pruritus, muscular wasting, and prostration, with bed sores, may occur. The lymph gland enlargement, mentioned as an early symptom, persists and the spleen remains swollen. The victim may succumb to some intercurrent disease which his lowered vitality invites, or he may die from exhaustion or in a convulsion. The disease is positively fatal so far as we are aware, no case of recovery having been recorded.

Treatment.—In a disease invariably fatal, treatment suggestions mean little. Arsenic, quinine and methylene blue have all been tried, pushed to the utmost limit of tolerance, and have been declared useless. Serum treatment has not yet been placed on a rational basis, injections thus far proving useless.

Shiga and Ehrlich have employed a synthetic product "trypanroth" with some success in the

treatment of animal trypanosomiasis. The preparation is hypodermatically introduced and is followed, it is claimed, by a disappearance of the parasites from the general circulation, or by a decided reduction in their numbers, at least, at the end of forty-eight hours. Leveran and others view their treatment, in association with the internal use of arsenious acid, hopefully, in connection with human trypanosomiasis.—*Jackson's Tropical Medicine.*

Comparison

By reading over the several symptoms of these diseases one will naturally be led to the conclusion that these three diseases have many symptoms common to each other and can be classified as belonging to one family, if I may be allowed to so call them. This conclusion is reached by a comparison of their symptoms and also by the fact that they are infectious, and if given favourable conditions, are likely to become epidemic, both among animals and people, being caused by disease-bearing germs. Apart from these considerations they admit of no routine hospital treatment. If it is given, the diseases assume serious aspect and death becomes certain. In addition to the above, that many professional men take cognizance to use quinine, arsenic and strychnine in every one of these diseases itself clearly shews that they are one and the same disease, but vary only in some special

symptoms peculiar to themselves in their own sphere. The mode of death is through failure of heart's action or from exhaustion through some intercurrent disease.

THE PROPOSED GENERAL TREATMENT

I have had the privilege to live among and watch persons who were suffering from two of these Triune Diseases—namely, Plague and Beri-Beri. Plague, as everybody knows, is a highly infectious disease, and one to which a person of ordinary courage will not care to expose himself. I, in the capacity of a Plague Inspector, have lived in four or five villages that became infected, and I and my people were obliged to drink the same polluted water that the villagers drank and which caused their death and to take shelter also in houses that became infected and abandoned and wherein also rats succumbed, but we happily escaped infection. Besides, in my observation in India, I found that the Tamils were seldom attacked, while the people of northern districts and those of Nilgiris suffered badly from Plague. This led me to think that there must be some defect in the mode of living of the people of Bellary and Nilgiris. My intimate knowledge of the several food-stuffs of the people of Bellary and Nilgiris, who easily get attacked, and those of the Tamils who apparently are immune to Plague, led me to think that there must be some

virtue in the difference of the article of diet—Gingelly oil—which is used largely by the Tamils and not by the Northerners. This is my strong conviction. To confirm this idea I overheard that some medical men also are of that opinion.

I am an Indian of the Tamil section and a new-comer to the Straits. I have used only uncured rice for the last three years. I find Siam rice to be clean and palatable. This rice no other Indian uses. I was frightened by my friends saying that it is a floating rumour here that Beri-Beri is caused largely by Siam rice and I should on no account use it. Despite this, however, even to-day myself and my household people use the Siam rice and we are free from any such complaint. This I attribute to the free use of gingelly oil which we make use of in bathing and in diet.

The above mentioned two experiences caused me to believe that the oil might be of some use in cases of Beri-Beri. To begin with, I ordered gingelly oil baths with warm water. The results I obtained were very encouraging. This enboldened me to order the oil internally, as it is only an article of diet and quite harmless. By its adoption I found excellent results, and much to my surprise many bed-ridden patients began to walk, no inter-current diseases appeared and above all apparently dying patients revived. These are truths which no one will dispute, as the results were obtained on more

than hundred cases. Such being the case, I am led to believe that the same oil may be of some use also in Sleeping Sickness, which is more or less allied to Beri-Beri and Plague.

As regards the use of the oil in Plague cases, I have already suggested it in the columns of *Practical Medicine*, dated July, 1907, published in Delhi, with doses and directions, which is as follows :—

Gingelly Oil for Plague.—Dr. D. J. Melchizedek, a medical practitioner and sanitary inspector, writes us from Straits Settlements that from his experience of plague epidemics in the districts of Bellary and from the fact that people who use gingelly oil as their article of diet are not susceptible to this disease, he is led to believe that this oil will prove to be a capital remedy for plague. He gives the oil in the form of emulsion, 12 drams of gingelly oil made into an emulsion with 4 drams of gum acacia and 24 ounces of peppermint water. Dose—one ounce every 4 hours. In bad cases the dose is doubled. As diet he gives strong pepperwater and rice well boiled. We have had no practical experience in this treatment and would be glad to know if any medical man can tell us something of this from practical experience.

My conclusion is that the gingelly oil or its active principle may be of use in the Triune Disease.

This is my humble opinion and view. I may be right or wrong, but I trust that everything said

and suggested will be taken in good spirit and errors kindly overlooked.

N.B.—It will not be out of place here to say the whole plant, flower, root and all, may thoroughly be tested for its use in these diseases, and I wish that some chemist might undertake to analyse it.

D. J. MELCHIZEDEK,
Medical Practitioner
and Certificated Sanitary Inspector.

Rawang,
Federated Malay States,
26th August, 1907.

MODE OF USING THE GINGELLY OIL

Simple and inexpensive as the oil is the efficacy of it combined with hot or cold water bathing is marvellous. If it is handled carefully and with discretion I think it is a sovereign remedy for the malady. In a ward of Beri-Beri patients it works wonders as it enables a life-long cripple to regain his strength, look brighter and more healthy, and enables him to get out of his bed and walk.

In experimenting with this oil in a ward care must be taken to select those who are fit for bathing with the oil. Patients should not be suffering from other complications, such as malarial fever, the after effects of any other long standing diseases, or patients that suffer from anaemia, debility, ascites, etc. Even if you make a wrong selection, if you think the patient is not improving, you will do well to discontinue the treatment in his case. It is not unlikely that during treatment patients get malarial fever, pains in the joints, rheumatism, diarrhœa, etc. Treat them in the ordinary way, giving them quinine, liniment, mixture, pot iodidid, etc., omitting the oil. When the patient is free of those complaints begin the oil treatment. None but those who are afflicted by this dire disease

should be selected. I mean by this that those who might be consideral hopeless, no matter how expert the treatment, should be chosen.

After patients are selected, begin the treatment first by giving oil baths and rubbing the oil externally. When you think the patient is sufficiently used to the oil you may give two tablespoons internally, morning and evening. The old mode of mixing the oil with gum is not necessary. By doing so the muscles begin to assume a growing appearance and the patients look more lively. Baths may be given twice a week or every other day. They must be regulated according to the severity of the case. When you think a Beri-Beri patient has been fairly relieved of all his bad symptoms and passed the stage of danger give him some suitable tonics, just as you would after a course of quinine in malarial fever.

The oil is only an article of diet with the Tamil section of the Madras Presidency and therefore the internal use of the drug will do no harm. When I first began to bathe my patients with the oil and warm water, I found they improved slowly, but when I gave the oil internally as well the improvement was rapid. To sum up the treatment: 1. Give bathing with warm or cold water, as the case may require; 2. Give the oil internally and rub the same on the benumbed limbs both morning and evening. The oil need not be made into emul-

sion as said in Experiment No. 1. The internal use of plain oil is found more efficacious than the emulsion. Use of cold water for bathing in chronic cases has since been found more beneficial than the warm and helps cripples to walk quickly.

Diet.—The oil is a cheap one and it will not cost two or three cents daily to use the oil for a patient, and therefore any liberal diet will not be a wastage. In the long run it will pay well as patients will be quickly discharged and there will be no necessity of extra expenses in supporting them till they die.

Bread, meat, soups of mutton or beef, eggs and all other articles of diet the patient is accustomed to may be given except pork. Pork is a dangerous article of food for any one who is suffering from any malady in India and I recommend its discontinuance.

Before closing this subject of treatment I may mention that in all wet cases a purgative dose of the oil may be tried with advantage; about four ounces I presume may purge a patient. In these cases bathing should not be given until such time as edema is gone down. When edema has sufficiently gone down the usual course of treatment, such as oil bathing, etc., may be given.

To succeed it is absolutely necessary to procure genuine and unadulterated oil and become acquainted practically with the method of treatment

employed by the discoverer himself or by those who are trained by him, without which success cannot be obtained as desired, for there is much to be learned from observation treatment adjusted thereto, which is known only to the discoverer.

I think I may be pardoned by the expert world, whatever may be their status of learning, for thus safeguarding myself. Instances are not wanting when failures have occurred, because the discoverer was not by reason of his inferior position or his supposed inability to cope with the established and renowned opinions of experts. Whatever may be the position of the person, consideration must be given as he may deserve and he must be kept foremost in the work and his opinion regarded as the best.

It is not uncommon that people become zealous of the success of others and proclaim to be useless the most useful discoveries. I am of opinion that so important a remedy as this, jealousy should not be allowed to play. I would request that no jealous spirit enter in things that concerns the welfare of humanity and more so with the Government. For such things are not for the man that opposes it, but for the safety of humanity in general.

In times of old, such jealousy was allowed to be practised, but now, whatever may be the power of the wicked that wish to suppress truth, it will one day or other overcome their wickedness and

they will be punished in the open daylight. For instance, "Saint John was banished for promulgating the Gospel Truth by the tyrant, Domitian, and was consigned to the tortures of the mines of Patmos, and the tyrant emperor thought that this preacher of righteousness and truth was finally disposed of and the world would not hear of him any more. So doubtless thought the persecutors of John Bunyan when he was shut up in Bedford gaol, but when man thinks he has buried the truth in eternal oblivion the Lord gives it a resurrection in tenfold glory and power. From Bunyan's dark and narrow cell there blazed forth a spiritual light, which next to the Bible itself has built up the interest of the Gospel; and from the barren isle of Patmos where Domitian thought he had for ever extinguished at least one torch of truth, there arose the most significant revelation of all the sacred canon to shed its divine lustre over the whole Christian world till the end of time."

Again it will be generally found that exceptions will be taken by adversaries. "Why will not other oils do the same good?" To this I say, that every oil has its own virtues and acts accordingly. A simple illustration will elucidate the matter clearly. All oils or fat will support combustion but there is a good deal of difference between kerosine oil and lamp oil. Can lamp oil, if put in the kerosine oil lamp, give the same brilliancy. Certainly not.

Again with any other oil than benzine, can motor-car be made to move. Certainly not. Every oil has its own intrinsic value and every one must be used in its place; otherwise it will not have its effect.

Dandilion is an old woman's remedy. This has been used by her, as it was doing good. She never knew the drug had chologuage properties, but still she used it. Time alone revealed its special action on the liver. So it may be said of quinine. No doctor disputed in the beginning the good of cinchona bark. It was doing wonders in eradicating fever from patients' systems. No one knew how it acted; it was only ofter the advent of microscopic examinations the value of the drug that was established as a specific for malarial fever.

Dr. Jenner never knew in the beginning that the vaccine lymph had the power to immunize people from the attack of smallpox. It was only experience that taught him the good effect of it.

It is always spoken of that Beri-Beri will work itself out and if a person is crippled, after some time he may work. It may be true. Why then are attempts made to treat the disease with medicine at all. Everybody knows no medicine cures any disease, as nature itself works its own way and the medicine assists only nature, and so it is the case withBeri-Beri and its treatment. The sooner a specific drug is applied the quicker is the relief and

hence the only thing for us to consider is whether the gingelly oil or the other proposed oils has made the crippled to walk, leaving his bed of lamentation, or relieved the unfortunate sufferer of his misery, or relieved the State of its wastage of expenditure.

I am given to understand that gingelly oil has emollient, antiseptic, tonic and nutrient properties. This view is according to the teachings of the Indian school of pharmaceutists and I am also given to understand that liberal-minded British surgeons who are acquainted with pharmacedynamics of Indian drugs agree with them. The attached result statements will surely prove that it is only gingelly oil that has done it. If any other remedy can be found to do the good, then and then only, gingelly oil may be thrown away as useless.

To tell the truth, many a good attempt has failed to find out the remedy for this pernicious disease. Many experts have given up. The disease has baffled many eminent physicians and in fact many have abandoned their experiments. Setting this aside, what about the enormous expenditure; what about the loss of time of great men; and, above all, what about the loss of valuable and useful lives who will be useful in the labour field on whom alone the construction of a Government depends. And so let us not work in jealousy but only try to reap the benefit the oil does till such time as a

more suitable remedy is found and not try through jealousy to suppress by the power of the pen what is beneficial to mankind and useful to the State. I need not add that the present mode of treatment of Beri-Beri is next to a mine of gold, preventing as it will wastage of hard earned money and thereby bringing a perpetual gain to the State. What we want now is effect and not theory. If effect is procured theory will soon follow.

Before closing the above statement as regards the consideration of a perpetual gain, I shall prove it by figures, as my enemies may say it is only self-praise. For instance, in the whole of the F.M.S. hospitals there are not less than a thousand patients or even more that are supported year after year for want of a suitable mode of treatment for actual Beri-Beri cases till they cease to be patients. It is clearly shown in the statement attached (Experiment No. 2) that for every hundred patients there is a clear gain of more than one thousand dollars and hence the expenditure of the Government year after year on 1,000 such cases will be 10,000 dollars. I quite believe this will be admitted by any fair-minded person.

Now let us turn to the legal aspect. It is usual in commerce to adulterate the oil to make a profit, and hence the oil must be bought from the mill, and not from the bazaar or through contractors, who, it need not be said, are often irresponsible persons.

The mills that manufacture the oil are located in all the chief towns of the Straits, such as Singapore, Penang, Kuala Lampur, and Seremban, and the oil is sold at from 25 to 30 cents a katty; that is, a bottle (24 ozs.) is worth only from 30 to 40 cents. It may bewell to consider the quality of the oil. One kind of oil is extracted by heat and pressing and the other by pressing alone. That which is obtained by heat will not be as efficacious as the one obtained by pressing only and the patients have no dislike for the latter kind of oil. During my experiments I have noticed patients cringing for this oil both because they found it relieved their sufferings and also because it is not distasteful, at least it is not worse than cod liver oil. A strict adherence to the above precautions and mode of treatment will be a great gain to the Government, in that many good labourers who can work in the mines will not be kept in the hospital for more days than are really necessary to cure them of their disease, and the necessity of spending so much money as they do now in supporting the cripples will be avoided. In addition to this, the misery of the unfortunate cripples will be alleviated. A perusal of the progress statements will verify the above assertion.

I have clearly shown by calculation in the attached statement of my Experiments Nos. 1 and 2 the difference in the expenditure and profits. This should prove sufficient reason for accepting this

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simple mode of treatment. An unceasing energy in carrying out this treatment under strict supervision will enormously and perpetually benefit the Government and prevent a large wastage of money. The only thing is that this treatment should be conducted by persons who are really interested in the welfare of the Government. If such persons cannot be found, the superintendent or the medical attendant should be held responsible for obtaining good results under pain of punishment. I would suggest that every Beri-Beri ward should be accommodated with a bathing place and arrangements made to give patients baths without much difficulty. Hot water or cold water as the case may be should be procured by scientific process. In its absence servants employed for this purpose soon become tired and the work consequently will not be done satisfactorily.

In the last few paragraphs I have animadverted upon the expenditure and wastage of money and expressed a wish for the welfare of the Government. It may be asked why I should have such a predilection for the Government. It is because I am a descendant of officials who worked with zeal and fidelity for the English Government for many years, the chief of whom was Mr. S. David Pillai, Minister and Government Secretary to His Highness the Maharajah of Tanjore in the Madras Presidency.

In conclusion I beg to state that I am extremely

thankful to Dr. A. A. Woods, District Surgeon, Seremban, for allowing me to give gingelly oil a fair trial on Beri-Beri patients. His love for suffering humanity and a desire to promote the interests of the Government is singularly conspicuous in his everyday life. This and this alone persuaded him to give me a chance of trying my new mode of treating this pernicious disease which has been for ages the enemy of the mining labourers. Great credit is due to him for having viewed the treatment without any prejudice.

(Sd.) D. J. MELCHIZEDEK,
Apothecary and Certificated
Sanitary Inspector.

APPENDIX

Dr. Braddon in his book called "The Cause and Prevention of Beri-Beri" gives an estimate of expenditure in a case of Beri-Beri in hospital for a month throughout the F.M.S. to be £10,000 annually. In the following extract, under the heading "Direct Cost of Beri-Beri to the Federated Malay States Government," he says: "Seeing that every Beri-Beric admitted to hospital spends a month there at least, the cost to the local Government on this single disease may be calculated at not less than £10,000 annually in direct charges. Indirectly it costs probably much more."

We can see then as per calculations in Experiment No. 1, Exhibit No. 3, that under symptomatic treatment of Dr. Gerrard 24 cases stayed in hospital for 2,283 days.

Therefore the average number of days a case stayed in hospital is $\frac{2283}{24}$, which is equal to three months. Then the actual expenditure under symptomatic treatment for all the cases in the F.M.S. according to Dr. Braddon's calculation will be £30,000 annually. That under oil treatment of the experiment, *vide* Exhibit No. 2, 24 cases stayed in hospital 569 days. Therefore the average number of days one case stayed in hospital is $\frac{569}{24} = 23$ days,

that is two-thirds of a month. Then under Dr. Braddon's calculation the expenditure will be only £10,000 ÷ $\frac{2}{3}$, which is equal to £6,666.

Again let us see the difference in expenditure as per Experiment No. 2 in Seremban Hospital.

The total number of days 14 cases stayed in Seremban hospital under Dr. Braddon's hospital routine treatment is 1,351 days, which is equal to ($\frac{1351}{14}$) 96½ days or three months for each case. Then the actual expenditure under Dr. Braddon's treatment for all the cases of the F.M.S. according to his calculation is £30,000.

The same 14 cases stayed in hospital (though chronic and incurable) only for 484 days under oil treatment; that is each case stayed $\frac{484}{14}$, or 34½ days or one month. Therefore the actual cost is £10,000, the actual difference being £20,000.

To put this concisely it is as follows:—

The difference between the cost of treatment G and M is equal to £23,334 and that of the difference between the treatments B and M is equal to £20,000. Hence the Government that adopts the oil treatment in place of symptomatic treatment will gain £23,334 annually, and the Government that follows the oil treatment in place of hospital routine treatment will gain £20,000 annually.

The difference in the result of two-thirds of a month of the stay of a case in Rawang hospital experimented with oil and one month of the stay

of a case in Seremban hospital under similar treatment is owing to the difference of cases selected for experiment (Exhibit 1). In Rawang recently admitted cases were selected for both experiments and in Seremban cases that were crippled and irremediable and in fact hopelessly abandoned cases from hospital routine treatment were selected for experiment.

Finally, the uniformity of successful results obtained between the symptomatic treatment of Dr. Gerrard and that of Dr. Braddon's hospital treatment on the one side, and the oil treatment on the other will in every way establish the superiority and usefulness of the oil treatment over the other treatment now carried on in the hospital.

(Sd.) D. J. MELCHIZEDEK,
Apothecary and Certificated
Sanitary Inspector

Tabular statement shewing the difference in Expenditure on Beri-Beri cases under different modes of treatment annually as per standard calculation stated by Dr. W. L. Braddon in F. M. S. in his book "The Cause and Prevention of Beri-Beri, 1907."

Name of place and mode of treatment.	Total number of cases under treatment.	Total number of days in hospital.	Average number of days a case stayed in hospital.		Days converted into months.	Expenditure as per Dr. Braddon's standard calculation.	Difference in expenditure.	Actual gain to Government if oil treatment is adopted.
RAWANG				Days				
Symptomatic treatment ..	24	2,283	$\frac{2283}{24}$ =	95·12	3	£30,000	£23,334	£23,334
The oil treatment ..	24	569	$\frac{569}{24}$ =	23·79	$\frac{2}{3}$	£6,666		
SEREMBAN								
Hospital routine treatment ..	14	1,351	$\frac{1351}{14}$ =	96·5	3	£30,000	£20,000	£20,000
The oil treatment ..	14	484	$\frac{484}{14}$ =	34·57	1	£10,000		

REMARKS.

The difference in the stay under the oil treatment (two-thirds of a month) in Rawang and the oil treatment in Seremban (one month) arises for reasons as follows:—

In Rawang recently admitted cases were selected for both treatments, oil and symptomatic, but in Seremban the same cases that were crippled or become irremediable and in fact hopelessly abandoned cases under hospital routine treatment were selected.

Permanently crippled patients in hospital for ever under routine hospital treatment walked under oil treatment and were discharged to the surprise of everybody that came to know about it.

SEREMBAN,
19th October, 1908.

(Sd.) D. J. MELCHIZEDEK,
Apothecary and Certificated Sanitary Inspector.

Result statement of Beri-Beri Patients from 21st August to 30th September, 1908.

No.	Reg. No.	Name.	Date of Admission.	Date of Transfer.	Date of Discharge	Date of Death.
1	1933	Choo Moh ..	25— 8—08	..	22—9—08	
2	2906	Ah Koi ..	22— 8—08	..	22—9—08	
3	2867	Ah Seng ..	17— 8—08			
4	2921	Wong Hun ..	23— 8—08			
5	2488	Chow Suo ..	8— 7—08			
6	2810	Chan Lo ..	11— 8—08			
7	2059	Lee Sam ..	31— 5—08			
8	2544	Oh Teng ..	27— 8—08	..	23—7—08	
9	2954	Lah Hin ..	28— 8—08	22—9—08	29—3—08	*
10	2967	Wong Tian ..	30— 8—08	..	..	31—8—08
11	2969	Sow Cheng ..	31— 8—08	..	7—9—08	
12	2971	Sew Tian ..	31— 9—08			
13	3068	Ah Heng ..	31— 9—08			
14	2997	Ch Kim ..	3— 9—08	..	..	25—9—08
15	3003	Chin Chee ..	31— 9—08			
16	2994	Bak Yong ..	31— 9—08			
17	2907	Yee Sing ..	22— 8—08	22—9—08	..	†
18	2141	Prong Kai ..	8— 8—08			
19	3017	Lee Yong ..	4— 9—08			
20	3037	Ing Ham ..	6— 9—08	..	11—9—08	
21	2613	Oug Keen ..	6— 9—08	..	..	11—9—08
22	2707	An Soo ..	7— 9—08			
23	3043	Mem Bok ..	2— 9—08			
24	3044	Vong Sum ..	7— 9—08			
25	4256	Lim Kim ..	18—10—07			
26	2066	Pong Choo ..	17— 8—08			
27	2742	Gon Chon ..	2— 8—08			
28	3045	Vong Ang ..	7— 9—08			
29	3058	Ah Kuan ..	8— 9—08	..	21—9—08	
30	3064	Lam Chong..	9— 9—08			
31	3063	Chong Sew ..	9— 9—08			
32	2840	See Fae ..	15— 8—08			
33	3084	Lin Pian ..	11— 9—08	..	..	18—9—08
34	3086	Kee Ho ..	11— 9—08			
35	3110	Mat ..	14— 9—08	..	18—9—08	
36	3114	Sah Fee ..	15— 9—08			

* Developed intercurrent disease, dysentery, and died after transfer.
† Developed intercurrent disease and died after transfer.

SEREMBAN, (Sd.) D. J. MELCHIZEDEK,

30th September, 1908. Apothecary and Certificated Sanitary Inspector.

Statement showing progress in health of Beri-Beri Patients under Gingelly-Oil Treatment

	Reg. No.	Name	Admitted	Days in hospital	State of health when oil treatment was given
1	1725	Ah Quee ..	29--4--08	101	Bed-ridden
2	2330	Sing Lee ..	25—6—08	44	Do.
3	1907	Kim Mou ..	24—5 -08	76	Do.
4	2470	Lee Choi ..	7—7—08	32	Do.
5	1826	Ye Sam ..	9—5—08	91	Do.
6	2405	Ah Su ..	1—7—08	38	Do.
7	1876	Ah Fok ..	14—5—08	86	Do.
8	2650	Soh Lok ..	24—6—08	45	Do.
9	2222	Chee Hoh ..	15—6—08	54	Do.
10	2550	Lin Sui ..	14—7—08	37	Do.
11	2710	Chee Yu ..	29—7—08	22	Do.
12	2695	Ah Kuang ..	28—7—08	23	Do.
13	2791	Kong Soon ..	8—8—08	13	Do.
14	2298	Poh Lok ..	22—6—08	47	Can walk with stick
15	2242	Kah Kam ..	17—6 -08	52	Do.
16	559	Ong Sec ..	10—2—08	180	Do.
17	1521	Poh Hoon ..	19—4—08	111	Do.
18	189	Tai Soon ..	15—1—08	208	Do.
19	2078	Goh Lam ..	1—6—08	68	Do.
20	1967	Lao Foo ..	22—5—08	77	Do.
21	1783	Tai Soh ..	5—5—08	95	Do.
22	1478	Tam Sing ..	13—4—08	117	Do.
23	1436	Loh Fah ..	14—4—08	120	Do.
24	1837	Lim Hoon ..	9—5—08	91	Do.
25	2217	Wong Chah ..	14—6—08	55	Do.
26	1165	Pong Fook ..	24—5—08	76	Can walk without stick
27	2782	Doh Aam (Malay)	7—8—08	14	Do.
28	2827	Moh Lah (was killed in fight 11-9-08) ..	13—8—08	8	Can walk with stick
29	2809	Eah Siew ..	11—8—08	10	Do.
30	2743	Tee Sing ..	2—8—08	19	Can walk without stick
31	2623	Foh Yong ..	27—7—08	1	Can walk with stick
32	2631	Loh Kong ..	22—7—08	29	Do.
33	2715	Soh Ban ..	30—7—08	21	Can walk without stick
34	2738	Hong Ching ..	2—8—08	19	Can walk with stick
35	2499	Cong Hee ..	9—7—08	12	Do.
36	2823	Hong Leng ..	12—8—08	9	Do.

Patients under Gingelly-Oil Treatment

Date of oil treatment	Progress in health — Remarks	Progress in health — Date	Discharged	Died
8—8—08	Can get out of bed ..	15—8—08	..	No death took place up to date.
Do.	Transferred to surgical ward as developed abscess ..	1—10—08	..	
Do.	Can walk with aid of stick ..	15—8—08	..	
	Can walk without stick ..	7—9—08	..	
Do.	Can walk with aid of stick ..	15—8—08	29—9—08	
	Can walk without stick ..	7—9—08	..	
Do.	Can walk with aid of stick ..	15—8—08	..	
Do.	Do. ..	15—8—08	29—9—08	
	Can walk without stick ..	7—9—08	..	
Do.	Can walk with aid of stick ..	15—8—08	..	
Do.	Do. ..	15—8—08	..	
Do.	Do. ..	15—8—08	14—9—08	
	Can walk without stick ..	7—9—08	..	
Do.	Can walk now without stick ..	..	..	
Do.	Can walk with stick ..	30—8—08	..	
Do.	Do. ..	29—8—08	..	
Do.	Can get out of bed ..	..	..	
Do.	Gave up stick ..	..	14—9—08	
Do.	Do. ..	..	3—9—08	
Do.	Do. ..	27—8—08	3—9—08	
Do.	Do. ..	Do.	3—9—08	
Do.	Do. ..	Do.	14—9—08	
Do.	Do. ..	Do.	31—8—08	
Do.	Do. ..	Do.	31—8—08	
Do.	Do. ..	Do.	14—9—08	
Do.	Do. ..	Do.	25—9—08	
Do.	Do. ..	Do.	29—9—08	
Do.	Do. ..	Do.	3—9—08	
Do.	Do. ..	Do.	29—9—08	
Do.	Has œdema of both legs ..	Do.	11—9—08	
21—8—08	....	Do.	31—8—08	
Do.	Can walk without stick ..	30—8—08		
Do.	Do. ..	31—8—08	14—9—08	
Do.	Do. ..	..	21—9—08	
Do.	Do. ..	1—9—08	1—9—08	
Do.	Do. ..	..	29—9—08	
Do.	Do. ..	..	29—9—08	
Do.	Do. ..	28—8—08	3—9—08	
Do.	Do. ..	28—8—08	25—9—08	
Do.	....	..	3—9—08	

Comparative statement showing the difference of Expenditure the Government undergoes in the adoption of Hospital Routine Treatment and Gingelly-Oil Treatment on Chronic Beri-Beri Cases

No.	Reg. No.	Name.	Under Hospital Routine Treatment.			Under Gingelly-Oil Treatment.		
			Days.	$	cts.	Days.	$	cts.
1	2243	Koh Kam ..	52	9	88	26	4	94
2	559	Ong See ..	180	34	20	26	4	94
3	1521	Poh Hoon ..	111	21	09	26	4	94
4	2078	Goh Lam ..	68	12	92	23	3	47
5	1967	Loh Fuk ..	77	14	68	23	3	47
6	1837	Lim Hoon ..	91	17	29	26	4	94
7	1165	Hong Fok ..	76	14	44	34	6	46
8	2222	Chee Fok ..	54	10	26	37	7	03
9	2298	Poh Luk ..	47	8	93	37	7	03
10	189	Hong Chee ..	208	39	52	37	7	03
11	1783	Thai Sak ..	95	18	05	37	7	03
12	1478	Tam Sing ..	117	22	23	52	9	88
13	1436	Loh Fah ..	120	22	80	48	9	12
14	2217	Wong Chah ..	55	10	45	52	9	88

Comparative Statement—contd.

Under Hospital Routine Treatment.			Under Gingelly Oil Treatment.			Calculation for 100 patients.		
Total days.	Total \$	Total cts.	Total days.	Total \$	Total cts.			
1351	256	69	484	91	96	Expenditure under Routine Hospital Treatment for 14 discharged cases ..	256	69
						Expenditure under Gingelly Oil Treatment for the same 14 discharged cases ..	91	96
						The actual gain of these 14 cases \$ ..	164	73
						Then for one case \$ 11-76	11	76
						Then for hundred cases \$ 1176 (100 cases) ..	1176	00
						The cost of oil is only 10 or 12 dollars.		

D. J. MELCHIZEDEK,
Apothecary and Certificated Sanitary Inspector.

SEREMBAN,
30th September, 1908

Remarks.

(1) Thirty-six cases were selected as fit for oil treatment from and after 8th August, 1908.

(2) The cripples or bed-ridden patients began to leave their beds within a short period of 7 to 10 days.

(3) The patients that are walking with the aid of sticks when admitted for oil treatment, abandoned the use of sticks within 15 or 20 days.

(4) Patients that were for several days in hospital were discharged comparatively cured in a short period.

(5) Cases that were taken for oil treatment before they became chronic were discharged quickly.

(6) Patients comparatively enjoyed better health and comfort and were more clean and bright.

(7) The use of this oil prevents not only the patients from becoming bed-ridden, but has prevented death.

N.B.—*No Beri-Beri cases complicated with other diseases or men suffering from senile debility should be taken for oil treatment.*

"*Comparison for 36 cases.*" Hospital *Routine* Treatment, 6 died, 8 discharged, 22 remained. Gingelly *Oil* Treatment, none died, 27 discharged, 9 remained.

EXPERIMENT No. 3

Commenced on 18th November and ended 18th December, 1908.

Beri-Beri Patients under Gingelly-Oil Treatment.

	Name	No.	Admitted	Discharged	Days ill	Died
1	Lee Moi ..	3669	10—11—08	23—11 -08	45	
2	Lou Yee ..	3492	24—11—08	26—11—08	60	
3	Ah Seng ..	2867	17— 8—08	4—11—08	150	
4	Wong Wah ..	3623	5—11—08	29 -11—08	60	
5	Hong Heng ..	3441	19—10—08	5—12—08	60	
6	Teo Lee ..	3525	27—10—08	..	60	
7	Leong Cheong..	3188	24— 9—08	23—11—08	60	
8	Hong Cheu ..	3289	5—10—08	6 -12—08	70	
9	Hin Poh ..	3671	10—11—08	7—12—08	90	
10	Kim Poh ..	3608	11—11—08	16—11--08	5	
11	Chang Cheong..	3233	29— 9 -08	25—11—08	100	
12	Leong Cheong..	3672	10—11—08	..	40	
13	Chong Keng ..	3692	13—11—08	..	60	
14	Ah Pan ..	3693	13—11—08	4—12—08	45	
15	Ah Yeu ..	3424	17—10—08	2—12—08	60	
16	Ah Lim ..	3510	25—10—08	5—12—08	150	
17	Ali ..	3706	14—11—08	..	60	
18	Layah ..	3658	9—11—08	7—12—08	90	
19	Kader ..	3396	15—10—08	19—11—08	60	
20	Ei Ong ..	3723	15—11—08	4—12—08	45	
21	Chim Tak ..	3789	20—11—08	..	30	
22	Chin Cheu ..	3782	9 -11—08	..	30	
23	Mohamed ..	3781	19—11—08	7—12—08	18	Nil
24	We Hong ..	3794	2—11—08	..	25	
25	Foo Jok ..	3815	23—11—08	..	47	
26	Hing Choi ..	3827	24—11—08	26—11—08	64	
27	Hong Sum ..	3814	23—11—08	4—12—08	240	
28	Ah Heng ..	3736	16—11—08	..	40	
29	Ten Seng ..	3577	1—11—08	..	30	
30	Cheu Lieu ..	3617	5—11—08	26—11—08	20	
31	Ah Heng ..	3694	13—11—08	2—12—08	30	
32	Ah Jin ..	3865	28—11—08	2—12 -08	20	
33	Lou Jin ..	3862	27—11—08	4—12—08	7	
34	Ah Seng ..	3867	28 -11—08	6—12—08	8	
35	Lee Chong ..	3289	5—10—08	6—12—08	62	
36	Tean Chee ..	3290	5—10—08	6—12—08	40	
37	Chin You ..	3934	4—12—08	7—12—08	20	
38	Ah Heng ..	3952	5—12—08	7—12—08	6	
39	Chee Yong ..	3967	7—12—08	16—12—08	40	
40	Ah Thong ..	4028	13—12—08	..	30	
41	Ah Hee ..	4033	13—12—08	..	60	
42	Yap Ghee ..	4034	13—12—08	..	30	
43	Ah See ..	4037	14—12—08	..	150	
44	Chou Chee ..	4038	14—12—08	Absconded	30	
45	Ah Thong ..	3977	7—12—08	16—12—08	40	

EXPERIMENT No. 3

Commenced on 18th November, etc.—concld.

Beri-Beri Patients under Gingelly-Oil Treatment.

	Name	No.	Admitted	Discharged	Days ill	Died
46	Hing Seng ..	3901	26—11—08	..	30	
47	Hi Chong ..	3855	4—12—08	..	30	
48	Choug Thong ..	3937	4—12—08	..	30	
49	Ah Eng ..	3822	24—12—08	..	22	
50	Teng Mah ..	3451	9—10—08	..	150	
51	Cheu Lim ..	2670	5—11—08	..	70	
52	Ah Hin ..	3694	13—10—08	2—12—08	47	
53	Kong Chong ..	3747	17—11—08	15—12—08	50	
54	Ah Heng ..	3822	24—11—08	..	32	
55	Hong Gum ..	3814	22—11—08	..	210	
56	Lim Kim ..	4256	18—11—08	..	395	
57	Thok Thoye ..	3104	14— 9—08	7—12—08	90	
58	Juan Chong ..	3334	9—10—08	..	60	
59	Ah Quee ..	1725	29— 4—08	..	202	
60	Ong Wong ..	2880	18— 8—08	..	250	
61	Hong Soon ..	2791	8— 8—08	..	120	
62	Suh Lok ..	2650	24— 6—08	..	180	
63	Ah Fook ..	1876	14— 5—08	3—12—08	210	
64	Lee Gum ..	3303	6—10—08	..	270	
65	Yee Sum ..	3315	8—10—08	9—12—08	90	
66	Hong Seng ..	3584	2—11—08	29—11—08	70	
67	Choo Kim ..	3352	11—10—08	6—12—08	70	
68	Lee Saw ..	2059	31— 5—08	...	210	Nil
69	Lee Chong ..	3810	8—11—08	12—12—08	100	
70	Teng Seng ..	3577	1—11—08	..	98	
71	Chang Tho ..	2810	11— 8—08	..	120	
72	An Goo ..	2707	29— 7—08	..	150	
73	Chin Yee ..	3275	3—10—08	..	90	
74	Vong Yu ..	3603	4—11—08	4—12—08	100	
75	Saramen ..	3631	6—11—08	..	120	
76	Seng Lai ..	3251	1—10—08	..	240	
77	Ah Li ..	3517	26—10—08	2—12—08	120	
78	Seng Lai ..	3251	1—10—08	..	240	
79	Chin Chou ..	3926	9—12—08	..	60	
80	Chee Hoh ..	3996	9—12—08	..	60	
81	Lou Chong ..	4004	10—12—08	..	120	
82	Loo Chong ..	3647	8—11—08	..	30	
83	Ing Sang ..	4018	11—12—08	..	20	
84	Ah Heng ..	4020	11—12—08	14—12—08	7	
85	Sun Tee ..	4080	18—12—08	..	60	
86	Tan Kwi ..	4048	15—12—08	..	15	
87	Leong Lee ..	3890	30—11—08	16—12—08	..	
88	Sam Chong ..	4060	16—11—08	17—12—08	..	
89	Pan Ki ..	4078	17—12—08	..	30	

EXPERIMENT No. 3

Commenced on 18th November, etc.—contd.

Beri-Beri Patients bed-ridden while under Hospital Treatment and made to walk by Oil Treatment.

	Name	No.	Admitted	Discharged	Days	Died
1	Juan Chong ..	3334	9—10—08	..	60	
2	Ah Quee ..	1725	29—4—08	..	202	
3	Hong Wong ..	2880	18—8—08	..	250	
4	Kong Soon ..	2791	8—8—08	..	120	
5	Sah Lak ..	1876	14—5—08	..	210	
6	Lee Sum ..	3303	6—10—08	..	270	
7	Yu Sam ..	3315	8—10—08	8—12—08	90	
8	Ah Fook ..	1876	14—5—08	..	210	
9	Hong Seng ..	3584	2—4—08	29—1—08	70	
10	Lee Sau ..	2059	31—5—08	..	210	
11	Choo Kim ..	3352	11—10—08	6—12—08	70	Nil.
12	Loo Chong ..	3648	8—11—08	..	100	
13	Teng Seng ..	3577	1—11—08	..	98	
14	Chan Tho ..	2810	11—8—08	..	120	
15	Au Soo ..	2707	29—7—08	..	150	
16	Chin Yee ..	3275	3—10—08	..	90	
17	Vong You ..	3603	4—11—08	4—12—08	100	
18	Saramen ..	3631	6—11—08	..	120	
19	Ali ..	3571	26—10—08	..	120	
20	Seng Lai ..	3251	1—10—08	..	120	

The Tree of Contrast of Results of the Treatment of Beri-Beri Cases

Hospital Routine Treatment

Unable to work	Becoming crippled while under treatment.	Large expenditure of State purse.	Occurrences of death.

Gingelly Oil Treatment

Enabling them to work.	Cripples and bed-ridden patients while under Hospital Routine treatment walking again.	Saving of State purse.	Prevention of death.

D. J. MELCHIZEDEK,
Apothecary and Certificated Sanitary Inspector.

SEREMBAN HOSPITAL, N. S.,
18th December, 1908.

Notes on Experiment No. 3.

(1) It is clearly proved by the first and second experiments with the oil treatment by numerical figures that the time required for all curable cases of Beri-Beri to recover is two-thirds of a month or less and the most is one month in exceptional cases.

(2) In this third experiment the same can be seen by taking a typical case for instance. A Malay Forest Guard named Mahomed Syed, register No. 3781, who was brought by the Conservator of Forests, Selangar, in a motor-car from Tampin hospital for treatment was admitted on 19th November, 1908, and was discharged fit for work on 7th December, 1908, equal to 19 days, which is equivalent to two-thirds of a month.

(3) By the experiments, statements Nos. 1 and 2, of the Hospital Routine treatment it is proved by numerical figures that it takes three months or more to dispose of a patient known to everybody.

(4) As per Dr. Braddon's standard calculation of expenditure for this single disease, Beri-Beri, throughout the whole of the Federated Malay State, if all admitted cases remaining in hospital for one month is £10,000, then for three months it is £30,000. As per the same calculation for two-thirds of a month it is £ 6,666 and for one month £10,000. *Vide* tabular statement attached.

N.B.—Hence the Federated Malay State Government would save for a year if the oil treatment is strictly, carefully and intelligently adopted £20,000 to £23,000.

GINGELLY-OIL TREATMENT

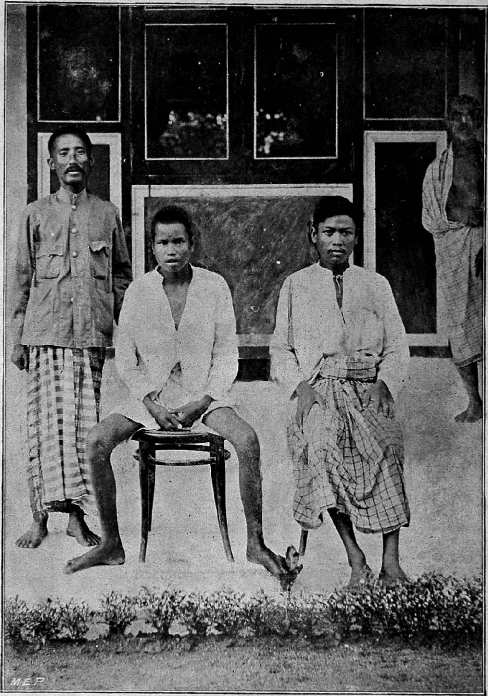
FOR

BERI-BERI CASES

Experiment No. III

Since closing Experiment No. 2, which was given voluntarily by Dr. A. A. Woods, the District Surgeon, the Beri-Beri ward, which was partially empty, became overcrowded and ten deaths occurred. As I was kept in charge of the ward, even after the closing of Experiment No. 2, because of the good results obtained by my experiments, I began Experiment No. 3 on the 18th November, 1908.

This time I took the whole ward, except a few patients that were not fit for oil treatment. Since the beginning of the treatment up to date, 1st December, 1908, no patients died; and all the other patients are improving remarkably well. All cripples except one or two are walking.



MALAY CRIPPLES GETTING WELL

The attached epitome will show the number of cripples or bed-ridden cases that were redeemed from their most miserable state of being confined to bed and awaiting death, since the commencement of the experiments. This in itself will prove that the oil is the medicine that has been long sought by several Government officers in the East.

Preface and Detailed Mode of Treatment

On the morning of the 22nd November, 1908, I visited ward No. 1, where patients are admitted. The dresser in charge of the ward showed me a patient admitted for Beri-Beri by him. I doubted if the patient was suffering from Beri-Beri alone, and suspected that he was suffering from malaria also. I put the blood of the patient under a microscope and found malarial parasites in it.

Dr. Max Brown, in his valuable book called "The Animal Parasite of Man," says as follows:—

"The opinion has also been expressed that in "such cases it was perhaps a question of combi-"nation of malaria with Beri-Beri."

Now, it is clear from what I have seen, together with what Dr. Max Brown has said, that these parasites in many cases combining together cause all the mischief.

To this dogma I wish to add that syphilis also takes a part. This may be proved by the following incident:

On the 25th November, 1908, I went to the Beri-Beri ward to arrange for the bathing of the patients. Patient Register No. 3181, a Forest Guard, said that he could not stand the bathing (thabula thagahan,) as he got pain all over the body when he took the oil bath. I at once suspected that he must have had some venereal disease, as this oil has the tendency to disturb or displace settled and lurking rheumatic poison and on questioning him he confessed that he had had venereal disease before.

It has often been noticed and accepted as true that people who suffered from venereal disease contracted Beri-Beri more easily than others ; and hence a doctor has to contend very often, though not always, against three enemies—while he poses himself to cure a case of Beri-Beri—that is, Beri-Beri bacilli, malarial parasite and syphilitic toxin.

It is decidedly known that mercury is a specific for syphilis, quinine for malarial parasite and a doctor has them all in his possession. But what about the specific for Beri-Beri! He has none. Such being the case, it is no wonder that all the attempts of eminent physicians to cure a case of Beri-Beri become futile or rather injurious, and, in fact, the state of those patients becomes more miserable after getting into hospital, and, still worse to state, they become bed-ridden and die, or become permanently unfit for work.

It will be known from all that has been said in this booklet and verified in the statements, that gingelly-oil is undoubtedly a "specific" for Beri-Beri and the action of the oil on the disease is marvellous. Therefore, let us consider this in good spirit, for the welfare of humanity and the prosperity of Government, and accept it as a "specific."

Here I may venture to say that if the oil is taken in a sufficient quantity, it will immunize a patient, and it can be used also as a prophylactic when Beri-Beri threatens to appear in the form of an epidemic.

As it is only an article of food among the Tamil section of India, it may be used without fear or further investigation. The Tamils of India use it along with their sauces as a condiment; likewise, it may be used by any nation that is molested by this dire disease, "Beri-Beri", in any way they prefer, and they need have no fear.

"Siam Rice." I have made an allusion to this in my article on "Triune Disease" which is included elsewhere in this booklet.

With other nations than the Indian, this oil may be a novel introduction, and, as such, people may feel reluctant in the beginning, or even become prejudiced to use it. I felt it rather difficult in the beginning to make the patients take the oil. It was something like making a

child take castor oil, and that is the reason I made it into an emulsion. However, gingelly-oil has a better smell than cod liver oil and a better taste than castor oil. A few kind words to the patients will easily make them take it, and in a few days' use of the oil their experience of the comfort it produces will make them cringe for it. This is my opinion.

Treating patients with oil, no doubt, sounds simple, but great care and intelligence are required if good results are needed in the shape of saving precious and useful lives.

Mode of Treating Pure Beri-Beri Cases

1. Give oil baths on Wednesdays and Saturdays; give no oil internally on bathing days and also the next day.

2. Give a half ounce of oil or even more internally once a day on Fridays, Mondays and Tuesdays; give rest on Sundays and Thursdays.

3. Every time the oil is given internally, a small quantity of it should also be well rubbed over the body and legs.

N.B.—If any tonic is found necessary, $1\frac{1}{4}$ grains of quinine can be given. This will be the best, as it will not only serve as a tonic but will also kill malarial parasites if any. Otherwise a physician can choose anything he thinks fit. On no account should mixture atropine be given.

Mode of Treating Beri-Beri Cases intermixed with Malarial Fevers

A half ounce of oil (gingelly) once a day and 5 grains of quinine twice a day until fever subsides; afterwards treat it as a pure Beri-Beri case. By this method the sufferings of patients become less and their lives perhaps saved.

Mode of Treating Beri-Beri Cases intermixed with Venereal Disease

Treat Beri-Beri first, and when all dangerous symptoms subside, give mixture Pot. Iodide c̄ mercury for a week or two, and so on, till the patient is discharged.

Bathing should be avoided when there is fever and mixture Pot. Iodide given when patient is very weak.

In cases of œdema it is judicious to administer mixture seinn. Coæ or 6 grains of mag. sulph. in a tumblerful of water, as often as it may be necessary; this will remove the swelling easily. Give no oil on that day; always give purgatives on the next day after that on which a patient has taken his bath. Baths should be given only two or three days after the oil has been given and not before. The longer the better.

In cases of anæmia or jaundice ferri c̄ quinine given once or twice a day will be very useful, but stop the oil in these cases and only give

baths. No mixture should be given on bathing days.

Caution

When you receive a patient in a ward, first ascertain whether it is a pure case of Beri-Beri or whether it has any connection with malaria or venereal disease. Cases intermixed with malaria generally give cause for alarm. Give the patient ½ oz. of oil and 5 grs. of quinine every 4 hours, at an interval of an hour; and rub the oil well on the body and feet of the patient. If he is weak feed him with milk every two hours.

In all other cases, give a patient ½ oz. at once and if he can stand bathing, bathe him the next day without fail, and continue as usual. It is not often that Beri-Beri cases are admitted with diarrhœa; if any are admitted, give the oil twice a day, but do not rub the body with it. Unless the diarrhœa is very severe do not interfere. It is a foolish policy to stop the diarrhœa, as it is only a natural elimination of the poison.

Record of Visits of the District Surgeon and his Remarks

The District Surgeon visited the ward this morning. Spoke to Kader, a Malay police constable, Register No. 9396. The patient said that he feels better, after taking the oil. In this case I used the oil a few

19th November, 1908

days previous to the beginning of the experiment, taking it as a special one. The District Surgeon gave his permission for seven days. He requested me to give him a bottle of the oil for his use while at home. I gave him a pint of oil, which he gladly took with him. Then the District Surgeon spoke to Ali, Register No. 3317. The patient said that he feels better. Then he asked the next patient, Register No. 3631, a Malay cripple, if he could walk. He said no! Then he asked Mr. Sithambaram if these get oil treatment. He said yes!

21st November, 1908

The District Surgeon visited the ward. Saw that all the patients were bright and clean. I showed him some important cases, and pointed out eight cases that were set apart as unfit for oil treatment. He questioned me as to why these cases cannot have the oil treatment. I told him they were not fit for the oil treatment. He did not question me further, suggesting that he agreed with me, or that he was of my opinion. He again made particular enquiries of the Malay patients and asked how they were getting on. They unanimously said they were doing well.

On returning to the office I handed over to him a statement containing the number of patients in the ward. As usual, the statement had a column opened for date of death. After a long survey of the list, he said there is a column also for

deaths. If there is death, I would not have "faith" in your treatment. I am sure he said so in jest. However, I will call to mind that the object of my treatment, though it may be the main one to prevent death, is only a secondary one, the chief object being alleviation of human suffering. Death may occur in various ways.

On the part of the patient:—

(1) It may be due to his neglect to seek medical aid earlier.

(2) It may be due to old age.

On the part of the physician :—

(1) Wrong diagnosis.

(2) Want of a suitable remedy.

(3) Pushing in of medicines without reason or rhyme.

(4) Want of suitable nourishment.

Therefore, value of medicine or mode of treatment should not be gauged by death-rate only, but by excellent and useful results obtained by the use of it.

I mean (1) Alleviation of human suffering, (2) Prevention of unnecessary detention of patients in hospital and causing wastage of the State purse, (3) Prevention of damage to the system of coolies by useless medicines—the coolies alone being the wealth of a Government.

The attached several statements will disclose to any unprejudiced eye that my treatment is very far superior to many that were proposed by the

Surgeons of this State.

Further, to speak on this matter, quinine is accepted as a specific for malarial fever.

Do not patients die of malarial fever still?

This morning about 46 patients were bathing.

25th November, 1908

The State Surgeon, Dr. Lucy, accidentally came in and asked me what all this was about. I answered and said that Beri-Beri patients were taking their bath with gingelly-oil.

He then asked me, "Is this doing good? Then, in answer to this enquiry and question, I showed him some patients that were crippled and bed-ridden who were now walking. He then enquired of a number of Malay cripple patients that are in the photograph, if this oil was doing good. They cheerfully answered "Yes! thuvan (thory) which means Lord."

The District Surgeon visited ward No. IV at

30th November, 1908

my request. I showed him two cases of Beri-Beri that were lying down hopelessly bad and were admitted in a dying state and explained also how they miraculously escaped death by the action of the oil. Then I brought to his notice the Malay cripple Saramen, Register No. 3631, who was asked on a previous visit, 19th November, 1908, if he could walk and who then said that he could not, but who now stated that he could walk; and when the cripple was asked

to get up from his bed, he got up and instantly receiving a stick upon my order, began to struggle, showing that he was willing and able to walk.

I immediately asked him to sit, as I knew the pain he was undergoing in such an attempt, and he, after sitting, testified that he with the help of the oil was redeemed.

I am sure misery like this will receive every attention it deserves. But, in a country where Christianity has no effect at all, it is nothing but "chaos and vanity."

Then the District Surgeon asked the patient that was brought by the Superintendent of the Forest Department all the way from Tampin for treatment adopted in Seremban, "if he feels better." He said that he will go to work, if the District Surgeon gives him permission. Then Dr. Woods said, "stay for a week and then go." The photograph attached as a frontispiece will show the state of the cripples and of their redemption.

Conclusion.—I am informed by the Malay Beri-Beri patients that there are many patients in their villages lying down as helpless as themselves. If they can be redeemed by some suitable arrangements, they will no doubt form a source of wealth to the country.

In fine, I have to thank once more Dr. A. A. Woods for all the encouragement and help he gave me; were it not for the noble and charitable

character of this officer, this great blessing could not have been offered to the general public.

(Sd.) D. J. MELCHIZEDEK,
Discoverer of the Specific,
Apothecary and Certificated Sanitary Inspector.

SEREMBAN,
NEGRI SEMBILAN,
1st December, 1908.

An Epitome of the Specific Action of Gingelly-Oil on Beri-Beri Cases

Total number of bed-ridden Beri-Beri Patients while under Hospital Treatment and made to walk by the magical effect of Oil Treatment.

No.	Name	Register No.	Date of admission	Duration of illness, days	Result
1	Ah Quee ..	1725	29— 4—08	236	Made to walk
2	Lee Choi ..	2470	7— 7—08	140	Made to walk
3	Ye San ..	1826	9— 5—08	169	Made to walk
4	Ah Su ..	2405	1— 7—08	120	Made to walk
5	Ah Fok ..	1876	14— 5—08	208	Made to walk
6	Soh Lok ..	2650	24— 6—08	225	Made to walk
7	Chee Hoh ..	2222	15 — 6—08	241	Made to walk
8	Lin Sui ..	2550	14— 7—08	250	Made to walk
9	Chee Yen ..	2710	27 — 7—08	149	Made to walk
10	Ah Huang ..	2695	28— 7—08	189	Made to walk
11	Kong Soon ..	2791	[illegible]— 8—08	[illegible]	Made to walk
12	Tuan Chong..	333[illegible]	9—10—08	60	Made to walk
13	Kong Wang..	288[illegible]	18—[illegible]—08	250	Made to walk
14	Lee Sum ..	330[illegible]	6—10—08	270	Made to walk
15	Ye San ..	331[illegible]	8—10—08	90	Made to walk
16	Hong Seng ..	358[illegible]	2—11—08	70	Made to walk
17	Choo Kim ..	3352	[illegible]—10—08	70	Made to walk
18	Lee Saw ..	2059	31—5—08	210	Made to walk
19	Loo Chong ..	3648	8—11—08	100	Made to walk
20	Ten Seng ..	3577	1—11—08	98	Made to walk
21	Chan Ho ..	2810	18— 8—08	120	Made to walk
22	Ah Soo ..	2707	29— 7—08	150	Made to walk
23	Chin Ye ..	3275	3—10—08	90	Made to walk
24	Wong Yo ..	3603	4—11—08	100	Made to walk
25	Saramen[illegible] ..	3631	6—11—08	120	Made to walk
[illegible]	Seng Lai ..	[illegible]851	10—10—08	..	..

Witnesses

(1) (Sd.) N. S. Pillay, Dresser in charge, Beri-Beri Ward.

(2) (Sd.) C. S. Chong, Dresser in charge, Beri-Beri Ward.

(3) (Sd.) Mahomed Syed, Forest Guard.

(4) (Sd.) Laijak, Lance-Corporal, S'ban.

(5) (Sd.) M.K. Murugasam, Dresser.

GENERAL HOSPITAL,
SEREMBAN—NEGRI SEMBILAN,
1st December, 1908.

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